

ABSTRACT

The invention is a device, and a method of using the device, for securing an intermedullary (IM) orthopedic nail within a fractured long bone of a human or large animal. The nail is provided with a plurality of target apertures, a portion of which are located above and below the fracture point of the bone. The device further comprises a jig adapted to be securely affixed to the IM nail, the jig having proximal and distal target arms, each having a plurality of apertures adapted to align with the target apertures.

When properly secured, the apertures of the jig align with the target apertures of the nail, and alignment devices are provided to accurately drill variable diameter holes through the bone cortex at the target apertures. A leading end of the slot finder is provided with a cross-sectional geometry substantially identical to the cross-sectional geometry of the target apertures, and enables the surgeon to be sure the slot finder is in the target aperture of the nail. The surgeon is assured that he has accurately located the target aperture because the rotational movement of the slot finder is limited to a maximum of about 20 degrees because of the securement of the leading end within the target aperture. The slot finder is further provided with a bearing surface that prevents further insertion of the slot finder within the target aperture, further providing the surgeon with assurance of the proper location of the slot finder. A unique screw secures the nail in place; the screw is provided with a larger diameter threaded portion and a smaller diameter threaded portion. A further aspect of the invention is an apparatus for forcibly removing the nail from the bone.